UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/872,413	06/01/2001	Jose Iborra	CHG-001.1P	3929

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EXAMINER
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ART UNIT	PAPER NUMBER
2124	

DATE MAILED: 10/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	09/872,413	IBORRA ET AL.
	Examiner	Art Unit
	John Chavis	2124

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on <u>30 June 2004</u>.

2a)☒ This action is **FINAL**.   2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) <u>1-24</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) <u>1-24</u> is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

        1.☐ Certified copies of the priority documents have been received.

        2.☐ Certified copies of the priority documents have been received in Application No. _____.

        3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

U.S. Patent and Trademark Office

PTOL-326 (Rev. 1-04)   Office Action Summary   Part of Paper No./Mail Date 063004

DETAILED ACTION

Response to Arguments

1.   Applicant's arguments filed June 30, 2004 have been fully considered but they are not persuasive. The applicant argues that Goodwin does not create complete formal language specifications for a complete, operable computer program. Then he indicates that presumably the extensible framework is written by hand and authored by a human.

However, the applicant should note in the first paragraph of the summary of the invention that Goodwin indicates that his system "**automatically generates source code...and business objects**". Also, in col. 6 lines 52-59 Goodwin indicates that "executable program (source code objects) are written **by the code generator...and the source code objects are executable...)**". Therefore, Goodwin's system generates complete and operable programs. He further indicates that the objects are defined "through the system definition and templates (specifications)",in col. 7 lines 33-39.

The applicant goes on to indicate that outputs from the code generator can be combined with other user defined codes as a means of indicating that Goodwin's system is not automatic. However, nothing in the applicant's statement indicates that the outputs MUST BE COMBINED. The term "can be combined" is interpreted by the examiner to indicate flexibility, not as a restriction that must be followed. The term **automatic** (above) is sufficient to overcome the options of other user or developer additions.

The applicant also indicates that Goodwin does not generate a specification; however, see Goodwin's col. 4 lines 21-29. A specification is merely a detailed description used to generate a program similar to Goodwin's object model (blueprint).

In reference to VDM Tools, the applicant indicates that the specifications "can be" unstructured. However, again nothing cited indicates that it "must be" unstructured. Again, the term "can be" is interpreted as an alternative. The applicant further indicates that VDM Tools is not automatic; however, see the third paragraph under the section entitled Specification Manager on page 1, which indicates that automatic checks is done for syntax, type checking, code generation, etc. (i.e. complete and correct).

The applicant further indicates that Koob's system is manual or at most semi-automatic. However, each of these are also considered alternatives; since, Koob specifically indicates in the abstract (see page 1) that his system is "automatic".

Furthermore, the reasons to combine the references is considered proper as presented in the previous action and therefore, the details of that action is attached below.

A modified copy of the previous action is hereby provided below to address newly presented issues.

Claim Rejections - 35 USC § 103

2.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3.   Claims rejected under 35 U.S.C. 103(a) as being unpatentable over Goodwin in view of Features of VDM Tools (23-9-98), and further in view of Koob.

CLAIMS:	Goodwin
1. An automated software production tool for generating a complete, correct, non ambiguous specification in a formal language which defines a complete operable software program, comprising: a software generating computer programmed to: receive user input that defines a conceptual model which models a system for which a computer program is to be written;	See the title and the abstract.
convert said conceptual model into a high level repository of formal specification statements stated in a formal language having rules of syntax and semantics;	See the generating portion of the abstract (last phrase of the first sentence). In reference to the syntax and semantics portions, see the parsing portion of fig. 5. Note also the definition of parsing (attached IEEE Definitions, inherently provides for the syntax and semantics features).
using...validating said formal...specification a validator program which, using the rules of syntax and semantics of said	The formal specification feature is considered taught by Goodwin' s definitions as indicated above. Also,

formal language, and verifying that every statement in said formal specification is syntactically complete, semantically correct and not ambiguous.

again see the system definition and templates in column 7 lines 32-39. Although the feature of testing converted programs is considered inherent in Goodwin's system to ensure the conversion is correct (col. 15 lines 58-65) and to ensure that the **business model** functions properly (col. 11 lines 36-40), Goodwin does not specifically mention it. However, the feature is taught by the article (cited prior art reference) entitled, Features of VDM Tools (23-9-98), to ensure the specification is correct (see the first and second pages). Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to utilize the feature in Goodwin's system for that same reason to ensure the specifications are correct. The feature is also taught by Koob for the same reason indicated above and Therefore, it would have been obvious to a person of ordinary skill in the art at the time of the invention to further modify the invention above to verify specifications, see section 3.

2. The system according to claim 1, wherein said software-generating computer is programmed to receive said user input using a CASE tool program for presenting a graphical user interface (GUI) to allow a user to input

The references in claim 1 are not to specifically indicated the CASE tools or the GUI features; however, the features are taught by the cited prior art reference to Koob et al. to enable the user to incorporate formal

the requirements of said formal specification using a graphical tools to model said conceptual model graphically.

specifications easier (via the GUI). Therefore, it would have been obvious To a person of ordinary skill in the art at the time of the invention to utilize the feature of claim 1 for the same reasons.

3. The system according to claim 1 wherein said software-generating computer is further programmed with a system logic translator, which controls said computer to process said formal language specification into one or more computer programs that can control a computer to carry out...all the functions modeled in said formal specification.

See the rejection of claim 2 above.

4. The system according to claim 3 wherein said software-generating computer is further programmed with a user interface translator, which controls said computer to process said formal language specification into one or more computer programs that can control a computer to implement a particular user interface for the program created by said system logic translator which has been modeled in said formal specification.

See again the rejection of claim 2.

5. The system according to claim 3 wherein said software-generating computer is further programmed with a database generator, which controls said computer to process said formal language specification into a data structure or database is capable of storing the values of at least all attributes of all objects defined in said formal specification in a manner such that the program or programs generated by said system logic translator can control a computer to read the values of said attributes at any time or store new values for said attributes at any time.

See again the rejection of claim 2 above.

6. The system according to claim 1 wherein said software-generating computer is further programmed by a documentation generator for producing documentation for the software application based on the formal specification.

See any of the references.

In reference to claims 7, 13-15, 17-20, and 23-24, see the rejection of claim 1.

As per claims 8-10, see the rejection of claims 3-5.

The features of claims 11-12 are taught via claims 3 and 2, respectively.

Claim 16 is taught via claim 2.

In reference to claims 21-22, see the rejection of claim 3.

Conclusion

4.   **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time

policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within

TWO MONTHS of the mailing date of this final action and the advisory action is not

mailed until after the end of the THREE-MONTH shortened statutory period, then the

shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

the advisory action. In no event, however, will the statutory period for reply expire later

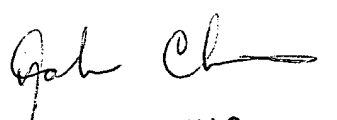than SIX MONTHS from the mailing date of this final action.

5.   Any inquiry concerning this communication or earlier communications from the

examiner should be directed to John Chavis whose telephone number is (703) 305-

9665. The examiner can normally be reached on 8:30 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kakali Chaki can be reached on (703) 305-9662. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jc
October 5, 2004

JOHN CHAVIS
PATENT EXAMINER
ART UNIT 2124